# Happy Birthday 10 Years

**Stab - USALS**
UNIVERSAL SATELLITES
AUTOMATIC LOCATION SYSTEM

The birthday boy himself: Giorgio Bergamini ▶
is the founder of the USALS program that is
celebrating its 10th anniversary in 2008.

# Stab - USALS
## UNIVERSAL SATELLITES AUTOMATIC LOCATION SYSTEM

# USALS
# Celebrates
# 10 Years

## Alexander Wiese

**Every TELE-satellite reader** is familiar with the term USALS. In the Technical Data table of every receiver test report there is a line that identifies whether or not the receiver is USALS compatible. Today, almost every receiver on the market comes with USALS. But USALS is not just a group of letters; there's actually a human behind this term!

USALS stands for "Universal Satellite Automatic Location System" and is software that was developed exactly ten years ago by Giorgio Bergamini. But it would be much better to hear the story from the birthday boy himself so off to Italy we go near Ferrara located about equidistant from Bologna and Venice. STAB's headquarters and production facility can be found there and Giorgio Bergamini is the founder and owner of STAB, a company that has been in existence since 1970.

STAB started early on building antenna motors. In the beginning it was rotors for VHF/UHF TV antennas and when satellite reception became popular in the 1990's, they expanded to offering an assortment of satellite antenna motors. "It was 1995", remembers Giorgio Bergamini, when a few of the early satellite receiver manufacturers got together with EUTELSAT and developed the DiSEqC protocol. In 1997 it was officially introduced and included DiSEqC 1.0 for individual LNBs, DiSEqC 1.1 for two LNBs and, DiSEqC 1.2 for antenna motors.

But it was quickly discovered that the 1.2 protocol could only be used on a limited basis: it required the storing of satellite positions in the motor and this turned out to be useless when the motor was used anywhere in the southern hemisphere. The dishes there are pointed to the north and not to the south. As a result, the order of satellites was no longer correct – it was now backwards compared to the northern hemisphere.

"In 1998 I had an idea: the positions should no longer be stored in the motor but instead in the receiver", remembers Giorgio. This was the birth of USALS. He wrote a small, but effective software program that with the help of only the local geographical position on the Earth and a reference satellite was able to calculate all the other satellite positions directly in the receiver, and it didn't matter if you were in the northern or southern hemisphere.

Finally, in January 2000, EUTELSAT officially recognized USALS and introduced it as DiSEqC 1.3. It is identical to DiSEqC 1.2 but includes an additional line of code: "Drive Motor to Angular Position".

▲ Sandro Gnani is a STAB technician who checks each sample receiver to make sure that USALS has been correctly implemented. The manufacturer can only print the USALS logo on the receiver and its packaging when the receiver has passed every test.

▲ A look in the warehouse with all the USALS tested receivers from every possible manufacturer around the world.

"Back then TELE-satellite was the first trade magazine to report on this", remembers Giorgio, "and after this report was published, the receiver manufacturers came to us to expand their software to include USALS." It turns out it's not so easy making a receiver USALS compatible. "Yes, the code itself is fairly small, but it contains functions that at first glance do not seem important", explains Giorgio about USALS's deeper secrets. "There were manufacturers that incorporated only the portion of the code that they understood", and this led to failures with specific configurations and motor incompatibility.

"Because of this, we require every manufacturer to send us a receiver sample so we can check that it fully complies with USALS", explains Giorgio, "Only then do we give permission for the manufacturer to use the USALS logo on the receiver and its packaging."

We wanted to know if anything new was in store for USALS. Giorgio Bergamini laughed quietly and said, "We are currently working on expanding USALS but we can't go into any details just yet." Giorgio promises some news in the Fall of 2008. We can't wait to see what that will be!

Giorgio Bergamini shows us the USALS ▶ code: it is made up of only 27 lines written in Excel. Receiver manufacturers must sign a non-disclosure agreement and can then incorporate this code in their receivers.